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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,769	10/09/2006	Patrick Rafter	US040193US	6782
28159 7590 02/03/2009 PHILIPS MEDICAL SYSTEMS PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3003 22100 BOTHELL EVERETT HIGHWAY BOTHELL, WA 98041-3003				
EXAMINER ROZANSKI, MICHAEL T				
ART UNIT 3768		PAPER NUMBER		
MAIL DATE 02/03/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,769

Applicant(s)

RAFTER, PATRICK

Examiner

MICHAEL T. ROZANSKI

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The finality of the previous action is withdrawn in view of Arguments presented in the Appeal Brief of 12/3/08.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being obvious over Rafter et al (US 6,503,203) in view of Poland (US 2003/0208124).

Rafter et al discloses an automated ultrasound system including control circuitry that sequentially adjusts the images settings so as to cause the transmit and receive circuitry to have a sequence of imaging configurations during an ultrasound imaging study. A memory is used to store imaging configurations describing the operation of the ultrasound imaging system (col 6, lines 35-53; col 7, lines 4-30). Rafter et al also teach of infusing the body with a contrast agent (see Abstract) and acquisition of a heart cycle waveform of the heart via ECG interface 140 (figure 1).

Rafter et al do not disclose a 2D array transducer and, therefore, do not disclose a beamformer controller, plane orientation control, storage device of different plane orientations, and acquisition control responsive to stored plane orientations. However,

Poland teaches of an ultrasonic diagnostic imaging probe with a steered image plane. The probe has a 2D array transducer 500, beamformer 116, and a plane orientation control 62 (see Figure 3).

It would have been obvious to the skilled artisan to modify Rafter et al, as taught by Poland, in order to implement a 2D arrangement including to store information regarding the plane orientations thereby automating the rapid changing of imaging modes and parametric information during a diagnostic exam (see Rafter et al at col 3, lines 53-56 for motivation). The Examiner has reviewed the arguments filed 12/3/08 and agrees with Applicant that Rafter et al does not use a 2D array transducer and, therefore, lacks the beamformer controller, plane orientation control, storage of image plane orientations, and acquisition control of the stored plane orientations. However, the 2D array transducer is known in the art, wherein the 2D array transducer (of Poland) includes the beamformer controller and plane orientation controller. In view of the two references, the skilled artisan would recognize that it would be useful to store plane orientation information (and likewise utilize that information to acquire data from successive plane orientations) when using a 2D array transducer. The Examiner realizes that Applicant has stated that the Sonos 5500 ultrasound system used in Rafter et al cannot use a 2D array transducer. However, the skilled artisan would understand it to be appropriate to use an ultrasound system that can use a 2D array transducer. This is because, as currently stated, Applicant is merely claiming an improvement over Rafter et al wherein a 2D array transducer is used and plane orientation information is saved to improve the efficiency of a diagnostic exam. While Rafter et al only feature

storing (and later replaying) information regarding imaging modes and the like appropriate for use with a 1D array transducer, the 2D array transducer is still known. The controllable features listed in Rafter (column 7) is exemplary, but not complete (note "etc"), thus indicating that Rafter realizes that additional aspects of interest may be controlled. As indicated, in implementing automation of a 2D array, the skilled artisan would be aware of the parameters of interest and could determine the ones that would need to be stored/controlled. Specifically, it is within the skill of the art to contemplate storing information (and later replaying) of plane orientations as for use with a 2D array transducer because, with a 2D array transducer, such information is useful.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. ROZANSKI whose telephone number is (571)272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

MR